PAC

Docket No.:

AVSI-0027 (108328.00161)

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants:

Ruxandra Draghia-Akli, et al.

Serial No.:

10/699,597

Filed:

October 30, 2003

Group:

1645

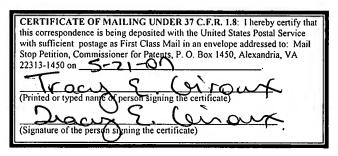
For:

SYNTHETIC MUSCLE PROMOTERS WITH ACTIVITIES EXCEEDING

NATURALLY OCCURRING REGULATORY SEQUENCES IN CARDIAC CELLS

Mail Stop: Petition Commissioner for Patents P. O. Box 1450 Alexandria, VA 22313-1450

Sir:



RESPONSE TO NOTICE OF ABANDONMENT UNDER 37 CFR 1.53 (F) OR (G)

In response to the Notice of Abandonment Under 37 CRF 1.53 (F) or (G) mailed March 14, 2007, enclosed please find the following documents:

- 1. Petition to Withdraw a Holding of Abandonment Based on Failure to Receive an Office Action under 37 CRF §1.181(a);
- 2. Copy of Notice of Abandonment under 37 CFR 1.53(f) or (g) [Exhibit A];
- 3. Copy of Withdrawal of Previously Sent Notice/ Notice to Comply with Requirements for Patent Applications Containing Nucleotide Sequence and/or Amino Acid Sequence Disclosures retrieved from the USPTO PAIR System [Exhibit B];
- 4. Statement from Practitioner in Support of Petition to Withdraw Holding of Abandonment Based on Failure to Receive Office Action;
- 5. Copy of docket record for Docket No. 108328.00161 [Exhibit C];
- 6. Amendment under 37 CFR §1.111;
- 7. Sequence Listing Statement Under 37 CFR §1.821(f);
- 8. Revised Sequence Listing on paper; and
- 9. Revised Sequence Listing on CD.

The commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment, to Deposit Account No. 10-0096.

1

4646102v.2

Respectfully Submitted,

T. Ling Chwang Reg. No. 33,590

Jackson Walker L.L.P.

901 Main Street, Suite 6000

my May 21, 2007

Dallas, Texas 75202

Tel: (214) 953-5959 Fax: (214) 661-6870

4646102v.2

PATENT

Attorney Docket No.: AV81-2027 (108328.00161)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

Ruxandra Draghia-Akli, et al.

Serial No.:

10/699,597

Filed:

October 30, 2003

For:

SYNTHETIC MUSCLE PROMOTERS WITH ACTIVITIES

EXCEEDING NATURALLY OCCURRING REGULATORY

SEQUENCES IN CARDIAC CELLS

Group No.:

1645

Examiner:

Kaushal, Sumesh

Mail Stop: Petition Commissioner for Patents P. O. Box 1450 Alexandria, VA 22313-1450

Sir:

CERTIFICATE OF MAILING: I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail in an envelope addressed to: Mail Stop Petition, Commissioner for Patents, P. O. Box 1450, Alexandria, VA 22313-1450, on 5-21-01

(Printed or typed name of person signing the certificate)

(Signature of the person signing the certificate)

AMENDMENT UNDER 37 C.F.R. § 1.111

In response to the Notice to Comply with Requirements for Patent Applications Containing Nucleotide Sequences and/or Amino Acid Sequence Disclosures dated July 6, 2006, please enter the enclosed Sequence Listing. In addition, please amend the above-identified patent application as follows. No new matter has been added.

4650453v.1 -1-

Attorney Docket No.: AVSI-0027 (108328.00161)

In the Sequence Listing:

Please replace the original Sequence Listing in the Specification with the replacement Sequence Listing as indicated on the Sequence Listing sheets (pages 1-24) that are part of the Statement under 37 C.F.R. §1.821(f) having the heading SEQUENCE LISTING:

In the Specification, please replace paragraphs [0005] and [0051] as follows:

Please amend Paragraph [0005] and Paragraph [0051] as follows. Certain original text contains underlining in the nucleotide sequence and this amendment simply adds of sequence identifiers. No new matter has been added.

Paragraph [0005]

[0005] The molecular mechanisms controlling cardiac-specific gene transcription requires the dissection of the cis-elements that govern the complex spatio-temporal expression of these genes. The vertebrate heart is formed during fetal development following a series of complex morphogenetic events that require the functional presence of different proteins, tightly regulated by combinatorial interactions of several transcription factors and their cofactors (Nemer and Nemer, 2001; Wang et al., 2001). First, the proximal serum response element (SRE) ('5-CC[A/T]6GG-3'), SEQ ID NO:23, of the skeletal α-actin promoter was incorporated. Multiple SREs are found in the cardiac, skeletal and smooth muscle α-actin promoters (Chang et al., 2001), and in the promoters of myosin light chain and dystrophin (Bergsma et al., 1986; Carroll et al., 1986). This cis-element is recognized by the trans-acting serum response factor (SRF), and by the competitive inhibitor YY1 (Chow and Schwartz, 1990; Lee et al., 1992; Minty and Kedes, 1986). Serum response factor (SRF) is a key regulator of a number of extracellular signal-regulated genes important for cell growth and differentiation (Zhang et al., 2001). Mutations in the proximal SRE that block SRF binding abolish skeletal α-actin promoter (SK) activity, indicating a fundamental role for this promoter element. Second, MEF-2 sites ('5-[C/T]TAAAAATAAC[C/T]3-3'), SEQ ID NO: 24, that have been found in

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the promoter/enhancer regions of the myosin light-chain 3 gene were selected. A single MEF-2 site lacks enhancer activity, but has multiple copies that exhibit strong enhancer activity (Gossett et al., 1989). Mutation of the MEF2 site severely reduced promoter activity in embryos, underlining the importance of MEF2 in controlling differentiation in all muscle lineages (Kelly et al., 2002). Third, the MEF-1 sites ('5-CANNTG-3'), or E-boxes that are found in the upstream regulatory region of most, if not all, muscle-specific genes were included (Olson et al., 1991; Weintraub et al., 1990). MEF-1 sites are recognized by the basic helix-loop-helix (bHLH) family of proteins. Multiple MEF-1 sites placed upstream of basal non-muscle promoters are sufficient to direct muscle-specific expression and MyoD-mediated trans-activation in transient assays (Lassar et al., 1991; Weintraub et al., 1990). Finally, the highly conserved muscle-CAT motif, or TEF-1 binding site ('5-CATTCCT-3') was selected. TEF-1 mediates both muscle-specific (SK, cardiac troponin T, cardiac α- and β-myosin heavy chain) and non-muscle specific transcription (simian virus 40 promoter) (Larkin et al., 1996; Stewart et al., 1994).

Paragraph [0051]

[0051] Different combination of SRE, MEF-1, MEF-2 and TEF-1 were then ligated in a total volume of 100μl using different molar ratio (Figure 1), maintaining a constant total amount of oligonucleotide of 200 pmoles. The core motif of each regulatory element (underlined) was flanked by adjacent sequence so that the binding sites of the regulatory elements would face the same side of the DNA helix when assembled together. The ligation reaction was completed with T4 ligase in 150μl. After ligation, the combination of elements was run on a 6% acrylamide gel. The 75-300-bp region was cut and eluted in 2 volumes of diffusion buffer at 37 °C overnight. The DNA was extracted using Qiaex II Gel Extraction Kit (Qiagen Inc., Chatsworth, CA, USA) and incubated in 150μl with phosphorylated and annealed Sp1 element (2.5 nmoles) and 10U of T4 ligase at 16 °C overnight. Since each of the Sp1 elements ('5-CCGTCCGCCCTCGG-3'), SEQ ID NO: 25, contains EagI half at both ends, an intact EagI restriction site was generated wherever two Sp1 elements were ligated together. The reaction was cleaned up (Qiaquick Nucleotide Removal Kit), digested with EagI and cloned into the EagI site of SK144GL-2 luciferase reporter construct, which resulted in a

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Attorney Docket No.: AVSI-0027 (108328.00161)

PATENT

library of randomized synthetic-promoter-recombinants that were operatively linked to a reporter gene. The clones that gave the best results in the transfection studies were sequenced automatically.

REMARKS

Applicants have amended the Sequence Listing to contain sequence identifiers for each of the sequences disclosed on page 4, lines 3 and 12, and page 18, line 17, of the Specification. Additionally, Applicants have enclosed replacement copies of the Sequence Listing in both paper and electronic format. The replacement copies contain a Statement under 37 C.F.R. §1.821 indicating that the paper and electronic copies are identical.

If the Examiner has any other matters which pertain to this Application, the Examiner is encouraged to contact the undersigned to resolve these matters by Examiner's Amendment where possible.

Respectfully submitted,

T. Ling Chwang

Registration No. 33,590

JACKSON WALKER L.L.P.

901 Main Street, Suite 6000

Dallas, Texas 75202

Tel: (214) 953-5959

Fax: (214) 661-6870

May 21, 2007

Date

Docket No. AVSI-0027 (108328.00161)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

applicant:

Ruxandra Draghia-Akli, et al.

Serial No.:

10/699,597

Filing Date:

October 30, 2003

For:

SYNTHETIC MUSCLE PROMOTERS WITH ACTIVITIES EXCEEDING NATURALLY OCCURRING REGULATORY SEQUENCES IN CARDIAC

CELLS

PETITION TO WITHDRAW HOLDING OF ABANDONMENT BASED ON FAILURE TO RECEIVE OFFICE ACTION UNDER 37 CFR 1.181(A)

Mail Stop: Petition Commissioner for Patents P. O. Box 1450 Alexandria, Virginia 22313-1450 CERTIFICATE OF MAILING UNDER 37 C.F.R. 1.8: I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as First Class Mail in an envelope addressed to: Mail Stop Petition, Commissioner for Patents P. O. Box 1450, Alexandria, VA 22313-1450 on

(Printed or typed name of person signing the certificate)

(Signature of the person signing the certificate)

Dear Sir:

Applicants, through their undersigned attorney, the Practitioner, hereby petition the U.S. Patent and Trademark Office ("USPTO") to withdraw the holding of abandonment in this application. A Notice of Abandonment, mailed March 14, 2007 [Exhibit A], was received by the Practitioner on March 16, 2007. A subsequent review of the file history in the USPTO Patent Application Information Retrieval System revealed a Withdrawal of Previously Sent Notice/Notice to Comply With Requirements for Patent Applications Containing Nucleotide Sequence And/Or Amino Acid Sequence Disclosures ("Withdrawal of Previously Sent Notice") was supposedly mailed on July 6, 2006 [Exhibit B]. This Withdrawal of Previously Sent Notice had never been received by the Practitioner. Applicants respectfully request that, since the Withdrawal of Previously Sent Notice was not received by the Practitioner, the Notice of Abandonment be withdrawn.

Docket No. AVSI-0027 (108328.00161)

The following documents are attached in support of this petition:

- 1. Statement From Practitioner in Support of Petition to Withdraw Holding of Abandonment Based on Failure to Receive Office Action; and
- Copy of docket record for Docket No. 108328.00161 [Exhibit C] showing no evidence of a
 Withdrawal of Previously Sent Notice being received by the Practitioner or a Response having
 been docketed at any time surrounding the deadline for response of August 6, 2006.

Applicants respectfully request that this Petition be granted.

The Commissioner is hereby authorized to charge any fees which may be required, or credit any overpayment to Deposit Account No. 10-0096.

Any inquiries regarding this correspondence may be directed to the undersigned at the address or telephone number shown below.

Respectfully submitted,

T. Ling Chwang Reg. No. 33,590

May 21, 2007

Jackson Walker L.L.P. 901 Main Street, Suite 6000 Dallas, Texas 75202

Tel: (214) 953-5959 Fax: (214) 661-6870

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Ruxandra Draghia-Akli, et al.

Serial No.:

10/699,597

Filed:

October 30, 2003

For:

SYNTHETIC MUSCLE PROMOTERS WITH ACTIVITIES

EXCEEDING NATURALLY OCCURRING REGULATORY

SEQUENCES IN CARDIAC CELLS

Art Unit:

1645

Examiner:

Kaushal, Sumesh

Mail Stop: Petition

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

Dear Sir:

CERTIFICATE OF MAILING UNDER 37 C.F.R. 1.8: 1 hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as First Class Mail in an envelope addressed to: Mail Stop Petition, Commissioner for Patents, P. O. Box 1450, Alexandria, VA 22313-1450 on

(Signature of the person signing the certificate)

STATEMENT UNDER 37 C.F.R. § 1.821 (F)

I hereby state that the content of the paper and computer readable copies of the Sequence Listing, submitted in accordance with 37 C.F.R. § 1.821 (e), § 1.821 (f), § 1.821 (g), § 1.825 (b) or § 1.825 (d) respectively, are the same. I also state that the paper and computer readable copies of the Sequence Listing submitted herewith contain no new matter.

Respectfully submitted,

T. Ling Chwang Reg. No. 33,590

Date: May 21, 2007

JACKSON WALKER L.L.P. 901 Main Street, Suite 6000

Dallas, TX 75202 Tel: 214-953-5959 Fax: 214-661-6870



,	SEQUENCE LISTING	
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	Baylor College of Medicine	
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                                                                      120
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                                                                      180
                                                                      240
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<220>

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<223> Xaa at position 28 may be serine or asparagine.

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Glu Arg Asn Gln Glu Gln Gly Ala 35 40

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1020

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<223> Nucleic acid sequence for the TI-GHRH plasmid.

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<210> 9

<211> 3534

<212> DNA

<213> artificial sequence

<220>

<223> Nucleic acid sequence for the TV-GHRH plasmid.

<400> 9

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<211> 3534 <212> DNA

<213> artificial sequence

<220>

<223> Nucleic acid sequence for the 15/27/28 GHRH plasmid.

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aatatggcga cggttcctca cccgtcgcca tatttgggtg tccgccctcg gccggggccg 300

360 cattectggg ggeegggegg tgeteeegee egeetegata aaaggeteeg gggeeggegg cggcccacga gctacccgga ggagcgggag gcgccaagct ctagaactag tggatcccaa 420 480 ggcccaactc cccgaaccac tcagggtcct gtggacagct cacctagctg ccatggtgct 540 ctgggtgttc ttctttgtga tcctcaccct cagcaacagc tcccactgct ccccacctcc 600 ccctttgacc ctcaggatgc ggcggtatat cgatgccatc ttcaccaaca gctaccggaa 660 ggtgctggcc cagctgtccg cccgcaagct gctccaggac atcctgaaca ggcagcaggg 720 agagaggaac caagagcaag gagcataatg actgcaggaa ttcgatatca agcttatcgg 780 ggtggcatcc ctgtgacccc tccccagtgc ctctcctggc cctggaagtt gccactccag 840 tgcccaccag ccttgtccta ataaaattaa gttgcatcat tttgtctgac taggtgtcct tctataatat tatggggtgg aggggggtgg tatggagcaa ggggcaagtt gggaagacaa 900 960 cctgtagggc ctgcggggtc tattgggaac caagctggag tgcagtggca caatcttggc 1020 tcactgcaat ctccgcctcc tgggttcaag cgattctcct gcctcagcct cccgagttgt 1080 tgggattcca ggcatgcatg accaggctca gctaattttt gtttttttgg tagagacggg 1140 gtttcaccat attggccagg ctggtctcca actcctaatc tcaggtgatc tacccacctt 1200 1260 ttttaaaata actataccag caggaggacg tccagacaca gcataggcta cctggccatg 1320 cccaaccggt gggacatttg agttgcttgc ttggcactgt cctctcatgc gttgggtcca 1380 ctcagtagat gcctgttgaa ttcgataccg tcgacctcga gggggggccc ggtaccagct 1440 tttgttccct ttagtgaggg ttaatttcga gcttggcgta atcatggtca tagctgtttc ctgtgtgaaa ttgttatccg ctcacaattc cacacaacat acgagccgga agcataaagt 1500 gtaaagcctg gggtgcctaa tgagtgagct aactcacatt aattgcgttg cgctcactgc 1560 ccgctttcca gtcgggaaac ctgtcgtgcc agctgcatta atgaatcggc caacgcgcgg 1620 1680 ggagaggegg tttgegtatt gggegetett eegetteete geteactgae tegetgeget cggtcgttcg gctgcggcga gcggtatcag ctcactcaaa ggcggtaata cggttatcca 1740 cagaatcagg ggataacgca ggaaagaaca tgtgagcaaa aggccagcaa aaggccagga 1800 accgtaaaaa ggccgcgttg ctggcgtttt tccataggct ccgcccccct gacgagcatc 1860 1920 acaaaaatcg acgctcaagt cagaggtggc gaaacccgac aggactataa agataccagg cgtttccccc tggaagctcc ctcgtgcgct ctcctgttcc gaccctgccg cttaccggat 1980 acctgtccgc ctttctccct tcgggaagcg tggcgctttc tcatagctca cgctgtaggt 2040 2100 atctcagttc ggtgtaggtc gttcgctcca agctgggctg tgtgcacgaa ccccccgttc

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60

<210> 11

<211> 2710

<212> DNA

<213> artificial sequence

<220>

<223> Vector with a mouse codon optimized GHRH analog sequence

<400> 11

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120 cggcaccatc ctcacgacac ccaaatatgg cgacgggtga ggaatggtgg ggagttattt 180 ttagagcggt gaggaaggtg ggcaggcagc aggtgttggc gctctaaaaa taactcccgg 240 gagttatttt tagagcggag gaatggtgga cacccaaata tggcgacggt tcctcacccg 300 tegecatatt tgggtgteeg eeeteggeeg gggeegeatt eetgggggee gggeggtget 360 cccgcccgcc tcgataaaag gctccggggc cggcggcggc ccacgagcta cccggaggag 420 cgggaggcgc caagcggatc ccaaggccca actccccgaa ccactcaggg tcctgtggac ageteaceta getgecatgg tgetetgggt getetttgtg atecteatee teaceagegg 480 cagccactgc agcctgcctc ccagccctcc cttcaggatg cagaggcacg tggacgccat 540 cttcaccacc aactacagga agctgctgag ccagctgtac gccaggaagg tgatccagga 600 660 catcatgaac aagcagggcg agaggatcca ggagcagagg gccaggctga gctgataagc 720 ttateggggt ggcatecetg tgacecetee ceagtgeete teetggeeet ggaagttgee 780 actocagtgc ccaccagcct tgtcctaata aaattaagtt gcatcatttt gtctgactag gtgtccttct ataatattat ggggtggagg ggggtggtat ggagcaaggg gcaagttggg 840 900 aagacaacct gtagggctcg aggggggcc cggtaccagc ttttgttccc tttagtgagg 960 gttaattteg agettggtet teegetteet egeteaetga etegetgege teggtegtte 1020 ggctgcggcg agcggtatca gctcactcaa aggcggtaat acggttatcc acagaatcag 1080 gggataacgc aggaaagaac atgtgagcaa aaggccagca aaaggccagg aaccgtaaaa aggeogegtt getggegttt ttecatagge teegeeece tgaegageat cacaaaaate 1140 1200 gacgeteaag teagaggtgg egaaaceega eaggaetata aagataceag gegttteeee ctggaagete cetegtgege teteetgtte egaecetgee gettacegga tacetgteeg 1260 cctttctccc ttcgggaagc gtggcgcttt ctcatagctc acgctgtagg tatctcagtt 1320 1380 cggtgtaggt cgttcgctcc aagctgggct gtgtgcacga acccccgtt cagcccgacc 1440 gctgcgcctt atccggtaac tatcgtcttg agtccaaccc ggtaagacac gacttatcgc 1500 cactggcagc agccactggt aacaggatta gcagagcgag gtatgtaggc ggtgctacag 1560 agttettgaa gtggtggeet aactaegget acaetagaag aacagtattt ggtatetgeg ctctgctgaa gccagttacc ttcggaaaaa gagttggtag ctcttgatcc ggcaaacaaa 1620 1680 ccaccgctgg tagcggtggt ttttttgttt gcaagcagca gattacgcgc agaaaaaaag 1740 gateteaaga agateetttg atetttteta eggggetage gettagaaga aeteateeag cagacggtag aatgcaatac gttgagagtc tggagctgca ataccataca gaaccaggaa 1800 acggtcagec cattcaccac ccagttcete tgcaatgtca cgggtageca gtgcaatgtc 1860

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<210> 12

<211> 2713

<212> DNA

<213> artificial sequence

<220>

<223> Vector with a rat codon optimized GHRH analog sequence

<400> 12

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ggaagggcga	tcg					2713

<210> 13 <211> 270

<211> 2704

<212> DNA

<213> artificial sequence

<220>

<223> Vector with a bovine codon optimized GHRH analog sequence

<400> 13

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atcg			÷			2704

<210> 14 <211> 2704 <212> DNA <213> artificial sequence

<220> <223> Vector with a ovine codon optimized GHRH analog sequence <400> 60 tgtaatacga ctcactatag ggcgaattgg agctccaccg cggtggcggc cgtccgccct 120 eggeaceate eteaegaeae ecaaatatgg egaegggtga ggaatggtgg ggagttattt 180 ttagagcggt gaggaaggtg ggcaggcagc aggtgttggc gctctaaaaa taactcccgg 240 gagttatttt tagageggag gaatggtgga caeccaaata tggegaeggt teeteaeceg 300 tegecatatt tgggtgteeg eecteggeeg gggeegeatt eetgggggee gggeggtget cccgcccgcc tcgataaaag gctccggggc cggcggcggc ccacgagcta cccggaggag 360 420 cgggaggcgc caagcggatc ccaaggccca actccccgaa ccactcaggg tcctgtggac ageteaceta getgeeatgg tgetgtgggt gttetteetg gtgaecetga ceetgageag 480 cggaagccac ggcagcctgc ccagccagcc cctgaggatc cctaggtacg ccgacgccat 540 600 cttcaccaac agctacagga agatcctggg ccagctgagc gctaggaagc tcctgcagga 660 catcatgaac aggcagcagg gcgagaggaa ccaggagcag ggcgcctgat aagcttatcg 720 gggtggcatc cctgtgaccc ctccccagtg cctctcctgg ccctggaagt tgccactcca 780 gtgcccacca gccttgtcct aataaaatta agttgcatca ttttgtctga ctaggtgtcc 840 ttctataata ttatggggtg gagggggtg gtatggagca aggggcaagt tgggaagaca 900 acctgtaggg ctcgaggggg ggcccggtac cagcttttgt tccctttagt gagggttaat 960 ttcgagettg gtetteeget teetegetea etgaeteget gegeteggte gtteggetge 1020 ggcgagcggt atcagctcac tcaaaggcgg taatacggtt atccacagaa tcaggggata 1080 acgcaggaaa gaacatgtga gcaaaaggcc agcaaaaggc caggaaccgt aaaaaggccg 1140 cgttgctggc gtttttccat aggctccgcc cccctgacga gcatcacaaa aatcgacgct caagtcagag gtggcgaaac ccgacaggac tataaagata ccaggcgttt ccccctggaa 1200 1260 getecetegt gegeteteet gtteegaeee tgeegettae eggataeetg teegeettte tecetteggg aagegtggeg ettteteata geteaegetg taggtatete agtteggtgt 1320 1380 aggtcgttcg ctccaagctg ggctgtgtgc acgaaccccc cgttcagccc gaccgctgcg ccttatccgg taactatcgt cttgagtcca acccggtaag acacgactta tcgccactgg 1440 1500 cagcagccac tggtaacagg attagcagag cgaggtatgt aggcggtgct acagagttct tgaagtggtg gcctaactac ggctacacta gaagaacagt atttggtatc tgcgctctgc 1560 1620 tgaagccagt taccttcgga aaaagagttg gtagctcttg atccggcaaa caaaccaccg 1680 ctggtagcgg tggttttttt gtttgcaagc agcagattac gcgcagaaaa aaaggatctc

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atcg						2704

<210> 15

<211> 2713

<212> DNA

<213> artificial sequence

<220>

<223> Vector with a chicken codon optimized GHRH analog sequence

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480 ageteaceta getgecatgg ceetgtgggt gttetttgtg etgetgaece tgaecteegg 540 aagccactgc agcctgccac ccagcccacc cttccgcgtc aggcgccacg ccgacggcat cttcagcaag gcctaccgca agctcctggg ccagctgagc gcacgcaact acctgcacag 600 660 cctgatggcc aagcgcgtgg gcagcggact gggagacgag gccgagcccc tgagctgata 720 agettategg ggtggcatec etgtgacece tecceagtge eteteetgge eetggaagtt 780 gccactccag tgcccaccag ccttgtccta ataaaattaa gttgcatcat tttgtctgac taggtgtcct tctataatat tatggggtgg aggggggtgg tatggagcaa ggggcaagtt 840 gggaagacaa cctgtagggc tcgaggggg gcccggtacc agcttttgtt ccctttagtg 900 960 agggttaatt tegagettgg tetteegett cetegeteae tgactegetg egeteggteg ttcggctgcg gcgagcggta tcagctcact caaaggcggt aatacggtta tccacagaat 1020 1080 caggggataa cgcaggaaag aacatgtgag caaaaggcca gcaaaaggcc aggaaccgta 1140 aaaaggccgc gttgctggcg tttttccata ggctccgccc ccctgacgag catcacaaaa 1200 ategacgete aagteagagg tggegaaace egacaggaet ataaagatae caggegttte 1260 cccctggaag ctccctcgtg cgctctcctg ttccgaccct gccgcttacc ggatacctgt 1320 ccgcctttct cccttcggga agcgtggcgc tttctcatag ctcacgctgt aggtatctca 1380 gttcggtgta ggtcgttcgc tccaagctgg gctgtgtgca cgaacccccc gttcagcccg 1440 accgctgcgc cttatccggt aactatcgtc ttgagtccaa cccggtaaga cacgacttat 1500 cgccactggc agcagccact ggtaacagga ttagcagagc gaggtatgta ggcggtgcta 1560 cagagttctt gaagtggtgg cctaactacg gctacactag aagaacagta tttggtatct 1620 gcgctctgct gaagccagtt accttcggaa aaagagttgg tagctcttga tccggcaaac aaaccaccgc tggtagcggt ggtttttttg tttgcaagca gcagattacg cgcagaaaaa 1680 1740 aaggatetea agaagateet ttgatetttt etaegggget agegettaga agaaeteate cagcagacgg tagaatgcaa tacgttgaga gtctggagct gcaataccat acagaaccag 1800 1860 gaaacggtca gcccattcac cacccagttc ctctgcaatg tcacgggtag ccagtgcaat gtcctggtaa cggtctgcaa cacccagacg accacagtca atgaaaccag agaaacgacc 1920 1980 atteteaace atgatgtteg geaggeatge ateaceatga gtaactacea ggteeteace 2040 atcoggcata cgagctttca gacgtgcaaa cagttcagcc ggtgccagac cctgatgttc ctcatccagg tcatcctggt caaccagacc tgcttccata cgggtacgag cacgttcaat 2100 2160 acgatgtttt gcctggtggt caaacggaca ggtagctggg tccagggtgt gcagacgacg cattgcatca gccatgatag aaactttctc tgccggagcc aggtgagaag acagcaggtc 2220

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ggaagggcga tcg	2713
<210> 16	
<211> 382	
<212> DNA	
<213> artificial sequence	
<220>	
<223> This is the synthetic promoter c1-26.	
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33c33cc3d3 53c33c3535 ca33ca3ca3 3c3cc33cac caccoccac c3cccaaaa	
ataactcccg tgaggaatgg tgccgtcgcc atatttgggt gtcgacaccc aaatatggcg	g 120
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acacctgctg cctgccggga gttattttta gagcggggag ttatttttag agcggtgagg	240
aatggtggac acccaaatat ggcgacggcc ggggccgcat teetgggggc egggeggtg	300
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gcgggaggcg ccaagctcta ga	382
<210> 17	
<211> 218	
<212> DNA .	
<213> artificial sequence	
<pre><220> <223> This is the synthetic promoter sequence for c2-26.</pre>	
<223> This is the synthetic promoter sequence for c2-26.	
<400> 17	
cggccgtcgc catatttggg tgtccgctct aaaaataact cccgacaccc aaatatggcg	g 60
	100
acggggcagg cagcaggtgt tgggacaccc aaatatggcg acggccgggg ccgcattcct	
gggggccggg cggtgctccc gcccgcctcg ataaaaggct ccggggccgg cggcggccca	
cgagetacce ggaggagegg gaggegeeaa getetaga	218

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<210> 18
<211> 230
<212> DNA
<213> artificial sequence
<220>
<223> This is the synthetic sequence for c2-27.
<400> 18
cggccgtcgc catatttggg tgtcggcagg cagcaggtgt tggcaccatt cctcacccgt
                                                                      60
cgccatattt gggtgtcggc aggcagcagt gttgggacac ccaaatatgg cgacggccgg
                                                                     120
ggccgcattc ctgggggccg ggcggtgctc ccgcccgcct cgataaaagg ctccggggcc
                                                                     180
ggcggcggcc cacgagctac ccggaggagc gggaggcgcc aagctctaga
                                                                     230
<210> 19
<211> 231
<212> DNA
<213> artificial sequence
<220>
<223> This is the synthetic promoter for c5-5.
<400> 19
                                                                     60
cggccgtccg ccctcgggac acccaaatat ggcgacgggt gaggaatggt gcaccattcc
                                                                    120
tcacqqqaqt tatttttaqa qcqqtqaqqa atqqtqqaca cccaaatatq qcqacqqccq
                                                                    180
gggccgcatt cctgggggcc gggcggtgct cccgcccgcc tcgataaaag gctccggggc
cggcggcggc ccacgagcta cccggaggag cgggaggcgc caagctctag a
                                                                     231
<210> 20
<211> 255
<212> DNA
<213> artificial sequence
<220>
<223> This is the synthetic promter for c6-5.
<400> 20
eggeeqtege catatttggg tgteccaaca cetgetgeet geeeegtege catatttggt
                                                                     60
gtcggcaggc agcaggtgtt ggccaacacc tgctgcctgc cgggagttat ttttagagcg
                                                                     120
                                                                     180
gacacccaaa tatggegacg geeggggeeg catteetggg ggeegggegg tgeteeegee
                                                                     240
cgcctcgata aaaggctccg gggccggcgg cggcccacga gctacccgga ggagcgggag
                                                                     255
gcgccaagct ctaga
<210> 21
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<211> 283

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<212> DNA
<213> artificial sequence
<220>
      This is the synthetic promoter for c6-16.
<223>
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                                                                     120
cccaacact gctgcctgcc ccgtcgccat atttggtgtc cgccctcggc cggggccgca
                                                                    180
ttcctggggg ccgggcggtg ctcccgcccg cctcgataaa aggctccggg gccggcggcg
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gccatatttg ggtgtcggca ggcagcaggt gttgggggag ttatttttag agcgccgtcg
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ccatatttgg gtgtcccgag ggcggacggc cggggccgca ttcctggggg ccgggcggtg
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<210> 25
<211> 14
<212> DNA
<213> artificial sequence
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<223> Sp1 element

<400> 25

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14



UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS P.O. Box 1450 Alexandria, Virginia 22313-1450

APPLICATION NUMBER FILING OR 371(C) DATE FIRST NAMED APPLICANT ATTY. DOCKET NO./TITLE 10/699,597

10/30/2003 Ruxandra Draghia-Akli 108328.00161 (AVSI-0027)

CONFIRMATION NO. 7762 ABANDONMENT/TERMINATION LETTER

25555 JACKSON WALKER LLP 901 MAIN STREET **SUITE 6000** DALLAS, TX 75202-3797

Date Mailed: 03/14/2007

NOTICE OF ABANDONMENT UNDER 37 CFR 1.53 (f) OR (g)

The above-identified application is abandoned for failure to timely or properly reply to the Notice to File Missing Parts (Notice) mailed on 07/06/2006.

No reply was received.

If a complete reply to the notice was previously filed by applicant within the time period set forth in the notice, applicant may request for reconsideration of the holding of abandonment within 2 months from the mailing of this notice of abandonment by filing a petition to withdraw the holding of abandonment under 37 CFR 1.181(a). No petition fee is required. The petition must be accompanied by a true copy of the originally filed reply and the item (s) identified in one of the following:

- 1. A properly itemized date-stamped postcard receipt (see MPEP § 503);
- 2. If the originally filed reply included a certificate of mailing or transmission in compliance with 37 CFR 1.8(a), a copy of the certificate of mailing or transmission and a statement in compliance with 37 CFR 1.8(b) (see MPEP § 512); or
- 3. If the reply was filed via Express Mail, a submission satisfying the requirements of 37 CFR 1.10(e) including, for example, a copy of the Express Mail mailing label showing the "date-in" (see MPEP § 513).

Any petition to withdraw the holding of abandonment should be directed to OIPE.

If applicant did not previously file a complete reply within the time period set forth in the notice, applicant may file a petition to revive the application under 37 CFR 1.137.

Under 37 CFR 1.137(a), a petition requesting the application be revived on the grounds of **UNAVOIDABLE DELAY** must be filed promptly after the applicant becomes aware of the abandonment and such petition must be accompanied by: (1) an adequate showing of the cause of unavoidable delay; (2) the required reply to the aboveidentified Notice; (3) the petition fee set forth in 37 CFR 1.17(I); and (4) a terminal disclaimer if required by 37 CFR 1.137(d). See MPEP § 711.03(c) and Form PTO/SB/61.

Under 37 CFR 1.137(b), a petition requesting the application be revived on the grounds of **UNINTENTIONAL** DELAY must be filed promptly after applicant becomes aware of the abandonment and such petition must be accompanied by: (1) a statement that the entire delay was unintentional; (2) the required reply to the above-

MAR 1 6 2007

identified Notice; (3) the petition fee set forth in 37 CFR 1.17(m); and (4) a terminal disclaimer if required by 37 CFR 1.137(d). See MPEP § 711.03(c) and Form PTO/SB/64.

Any questions concerning petitions to revive should be directed to the "Office of Petitions" at (571) 272-3282.

A copy of this notice MUST be returned with the reply.

Office of Initial Patent Examination (571) 272-4000, or 1-800-PTO-9199
PART 1 - ATTORNEY/APPLICANT COPY



UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address COMMISSIONER FOR PATENTS P.O. Box 1450 Alexandria, Virginia 22313-1450 www.uspto.gov

APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE		
10/600 505	10/20/2022	D 1 D 1: 411	100220 00161 (4 1/01 0027)		

10/699,597 10/30/2003 Ruxandra Draghia-Akli

108328.00161 (AVSI-0027)

CONFIRMATION NO. 7762
ABANDONMENT/TERMINATION
LETTER

25555 JACKSON WALKER LLP 901 MAIN STREET SUITE 6000 DALLAS, TX 75202-3797

Date Mailed: 03/14/2007

NOTICE OF ABANDONMENT UNDER 37 CFR 1.53 (f) OR (g)

The above-identified application is abandoned for failure to timely or properly reply to the Notice to File Missing Parts (Notice) mailed on 07/06/2006.

No reply was received.

If a complete reply to the notice was previously filed by applicant within the time period set forth in the notice, applicant may request for reconsideration of the holding of abandonment within 2 months from the mailing of this notice of abandonment by filing a petition to withdraw the holding of abandonment under 37 CFR 1.181(a). No petition fee is required. The petition must be accompanied by a true copy of the originally filed reply and the item (s) identified in one of the following:

- 1. A properly itemized date-stamped postcard receipt (see MPEP § 503);
- 2. If the originally filed reply included a certificate of mailing or transmission in compliance with 37 CFR 1.8(a), a copy of the certificate of mailing or transmission and a statement in compliance with 37 CFR 1.8(b) (see MPEP § 512); or
- 3. If the reply was filed via Express Mail, a submission satisfying the requirements of 37 CFR 1.10(e) including, for example, a copy of the Express Mail mailing label showing the "date-in" (see MPEP § 513).

Any petition to withdraw the holding of abandonment should be directed to OIPE.

If applicant did not previously file a complete reply within the time period set forth in the notice, applicant may file a petition to revive the application under 37 CFR 1.137.

Under 37 CFR 1.137(a), a petition requesting the application be revived on the grounds of **UNAVOIDABLE DELAY** must be filed promptly after the applicant becomes aware of the abandonment and such petition must be accompanied by: (1) an adequate showing of the cause of unavoidable delay; (2) the required reply to the above-identified Notice; (3) the petition fee set forth in 37 CFR 1.17(I); and (4) a terminal disclaimer if required by 37 CFR 1.137(d). See MPEP § 711.03(c) and Form PTO/SB/61.

Under 37 CFR 1.137(b), a petition requesting the application be revived on the grounds of **UNINTENTIONAL DELAY** must be filed promptly after applicant becomes aware of the abandonment and such petition must be accompanied by: (1) a statement that the entire delay was unintentional; (2) the required reply to the above-

identified Notice; (3) the petition fee set forth in 37 CFR 1.17(m); and (4) a terminal disclaimer if required by 37 CFR 1.137(d). See MPEP § 711.03(c) and Form PTO/SB/64.

Any questions concerning petitions to revive should be directed to the "Office of Petitions" at (571) 272-3282.

A copy of this notice <u>MUST</u> be returned with the reply.

Office of Initial Patent Examination (571) 272-4000, or 1-800-PTO-9199

PART 2 - COPY TO BE RETURNED WITH RESPONSE

1Notice of Abandonment

This application is abandoned in view proper reply to the Office notice mailed 07/06/06

Petition to Withdraw the Holding of Abandonment

If a complete reply to the notice was previously filed by applicant within the time period set forth in the notice, applicant may request for reconsideration of the holding of abandonment within 2 months from the mailing of this notice of abandonment by filing a petition to withdraw the holding of abandonment under 37 CFR 1.181(a). No petition fee is required. The petition must be accompanied by a true copy of the originally filed reply and the item(s) identified in one of the following:

- 1. A properly itemized date-stamped postcard receipt (see MPEP § 503);
- 2. If the originally filed reply included a certificate of mailing or transmission in compliance with 37 CFR 1.8(a), a copy of the certificate of mailing or transmission and a statement in compliance with 37 CFR 1.8(b) (see MPEP § 512); or
- 3. If the reply was filed via Express Mail, a submission satisfying the requirements of 37 CFR 1.10(e) including, for example, a copy of the Express Mail mailing label showing the "date-in" (see MPEP § 513).

Any petition to withdraw the holding of abandonment should be transmitted by facsimile directly to OIPE Customer Service at (703) 308-7751.

Petition to Revive an Abandoned Application

If applicant did <u>not</u> previously file a complete reply within the time period set forth in the notice, applicant may file a petition to revive the application under 37 CFR 1.137.

Under 37 CFR 1.137(a), a petition requesting the application be revived on the grounds of UNAVOIDABLE DELAY must be filed promptly after the applicant becomes aware of the abandonment and such petition must be accompanied by:

- 1. an adequate showing of the cause of unavoidable delay;
- 2. the required reply to the above-identified notice;
- 3. the petition fee set forth in 37 CFR 1.17(i); and
- 4. a terminal disclaimer if required by 37 CFR 1.137(d).

See MPEP § 711.03(c) and Form PTO/SB/61.

Under 37 CFR 1.137(b), a petition requesting the application be revived on the grounds of UNINTENTIONAL DELAY must be filed promptly after applicant becomes aware of the abandonment and such petition must be accompanied by:

- 1. a statement that the entire delay was unintentional;
- 2. the required reply to the above-identified notice;
- 3. the petition fee set forth in 37 CFR 1.17(m); and
- 4. a terminal disclaimer if required by 37 CFR 1.137(d).

See MPEP § 711.03(c) and Form PTO/SB/64.

Any questions concerning petitions to revive should be directed to Office of Petitions at (703) 305-9282.

Any questions regarding this notice should be directed to OIPE Customer Service at (703) 308-1202.

Customer Service Center
Initial Patent Examination Division (703) 308-1202

EXHIBIT B



UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address COMMISSIONER FOR PATENTS Post 1450 Alexandra, Vignia 22313-1450 eventaging por

CAPPLICATION NUMBER 10/699,597

JACKSON WALKER LLP

DALLAS, TX 75202-3797

901 MAIN STREET **SUITE 6000**

FILING OR 371(c) DATE

FIRST NAMED APPLICANT

ATTY. DOCKET NO/TITLE

10/30/2003

Ruxandra Draghia-Akli

108328.00161 (AVSI-0027)

CONFIRMATION NO. 7762 WITHDRAWAL

NOTICE

Date Mailed: 07/06/2006

WITHDRAWAL OF PREVIOUSLY SENT NOTICE

The Notice mailed on 06/01/2004 was sent in error and is hereby withdrawn. A corrected Notice is enclosed. The time period for reply runs from the mail date of the corrected Notice. The Office regrets any inconvenience the error may have caused.

A copy of this notice MUST be returned with the reply.

Customer Service Center

Initial Patent Examination Division (571) 272-4000, or 1-800-PTO-9199, or 1-800-972-6382 **PART 3 - OFFICE COPY**



UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address COMMISSIONER FOR PATENTS FO. Box 1439 Alexandria, Vignica 22313-1450 www.ming.ov

APPLICATION NUMBER

FILING OR 371 (c) DATE

FIRST NAMED APPLICANT

ATTORNEY DOCKET NUMBER

10/699,597

10/30/2003

Ruxandra Draghia-Akli

108328.00161 (AVSI-0027)

FORMALITIES LETTER

25555 JACKSON WALKER LLP 901 MAIN STREET SUITE 6000 DALLAS, TX 75202-3797

Date Mailed: 07/06/2006

NOTICE TO COMPLY WITH REQUIREMENTS FOR PATENT APPLICATIONS CONTAINING NUCLEOTIDE SEQUENCE AND/OR AMINO ACID SEQUENCE DISCLOSURES

Filing Date Granted

This application contains sequence disclosures that are encompassed by the definitions for nucleotide and/or amino acid sequences set forth in 37 CFR § 1.821(a)(1) and (a)(2). However, this application fails to comply with the requirements of 37 CFR §§ 1.821-1.825. The application must be in sequence compliance before examination on the merits.

APPLICANT IS GIVEN ONE MONTH FROM THE DATE OF THIS LETTER WITHIN WHICH TO COMPLY WITH THE SEQUENCE RULES, 37 CFR §§ 1.821-1.825. Failure to comply with these requirements will result in ABANDONMENT of the application under 37 CFR § 1.821(g). Extension of time may be obtained by filing a petition accompanied by the extension fee under the provisions of 37 CFR § 1.136. In no case may an applicant extend the period for response beyond the six-month statutory period. Direct the response to: Mail Stop Missing Parts, Commissioner for Patents, P.O. Box 1450, Alexandria VA 22313-1450.

See the attachment.

Applicant Must Provide as part of the response:

- An initial or substitute computer readable form (CRF) copy of the "Sequence Listing".
- An initial or substitute paper copy of the "Sequence Listing", as well as an amendment directing its entry into the specification.
- A statement that the content of the paper and computer readable copies are the same and, where applicable, include no new matter, as required by 37 CFR 1.821(e) or 1.821(f) or 1.821(g) or 1.825(b) or 1.825(d).

To Download Patentin Software, visit http://www.uspto.gov/web/patents/software.htm For questions regarding compliance to these requirements, please contact:

- For Rules Interpretation, call (571) 272-0951
- For Patentin Software Program Help, call Patent EBC at 1-866-217-9197 or directly at 703-305-3028 / 703-308-6845 between the hours of 6 a.m. and 12 midnight, Monday through Friday, EST.
- Send e-mail correspondence for Patentin Software Program Help @ ebc@uspto.gov

Replies should be mailed to:

Mail Stop Missing Parts

Commissioner for Patents

P.Q. Box 1450

Alexandria VA 22313-1450

A copy of this notice MUST be returned with the reply.

Office of Initial Patent Examination (571) 272-4000, or 1-800-PTO-9199, or 1-800-972-6382
PART 3 - OFFICE COPY

OIPE ROUTING SHEET



APPLICATION

IFW DocCode - SEQREQ Index using Current Date

10699597

TO BE DELIVERED TO: Tech Center Scanning

Sequence Rule Compliance Review Item

CRF, paper copy of sequence listing, and statement that both are same missing
CRF contains error(s) according to STIC Report
CRF damaged or unreadable according to STIC Report
CRF transferred from prior application is not compliant

Place an "X" in the appropriate box

DAVE TRONG NGUYEN
SUPERVISORY PATENT EXAMPLE

Comment Sheet

APPLICATION SERIAL NUMBER 10/699597

DOES NOT COMPLY WITH THE SEQUENCE RULES. See reasons below.

Page(s) 4, line 3 and 12 and page 18, line 17 contain sequences not found in the CRF.

						EXHIBIT	C					
JW# ¹	108328.016	1								Pf	RINTED ON:	4/10/2007
COUNTRY US UNITED STATES						TITLE					PRIOR	11/4/2002
NEW/CON .	FCA		SERIAL#	10/699,597		(AVSI-0027) WITH ACTIV				ROMOTERS	MAIL	10/30/2003
RELATED	108328.008	5	PATENT#			OCCURRIN	G REG				FILE	10/30/2003
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Draghia-Al	kli, Ruxandra			1								
Schwartz,												
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ТХТЗ					PUE	BLICATION#				CONFIRM#		

BY DAP

P02065US01

ENTERED 11/3/2003 MODIFIED 6/2/2006

TLC / CC / DAP

ATTORNEYS